SEQUENCE LISTING

<110> Scriptgen
Thompson, M. Craig
Long, Fan
Wobbe, C. Richard

<120> A NOVEL FUNGAL MULTISUBUNIT PROTEIN COMPLEX CRITICAL FOR EXPRESSION OF FUNGAL PROTEINS

<130> 0342/2D516

<140> Unknown
<141> Filed Concurrently

<150> 60/074,100
<151> 1998-02-09

<160> 32

<170> FastSEQ for Windows Version 3.0

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<212> DNA
<213> C. albicans

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<213> C. albicans

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Ala Ala Gln Ala Ala Ala Glu Ser Gln Phe Asp Ala Leu Phe Gly Asn
    50                  55                  60
Ser Asn Asp Phe Asp Ser Asn Ile Ser His His Asp His Met Gly Gly
65                  70                  75                  80
Asp Ser Asn Gly Ile Ile Asp Asp Asn His His Ser Ser Val Asn Asp
                85                  90                  95
His Asp Gly Leu Phe Asn Asn Leu Gly Asn Gly Asn His Leu Leu Asp
            100                 105                 110
Asp Asp Asn Asp Gly Leu Asn Asp Leu Gly Glu Leu Phe Asp Asp Gln
        115                 120                 125
Gln Glu Asp Ser Asn Val Ile Asn Thr Lys Lys His Lys Leu Asp Asp
    130                 135                 140
Asp Ser Asn Asn Asp Gly Lys Thr Ala Gln Glu Asp Gln Lys Glu Lys
145                 150                 155                 160
Glu Asn Lys Arg Gln Leu Lys Arg Gln Lys Leu Gln Lys Ile Val Lys
                165                 170                 175
His Leu Glu Lys Glu Gln Ile Lys Arg Asn Ile Lys Tyr Tyr Phe Pro
            180                 185                 190
Thr Tyr Ser Arg His Arg Pro Phe Asn Phe His Lys Phe Phe Ser Pro
        195                 200                 205
Ser Pro Gln Tyr Tyr Arg Tyr Gln Arg Pro Ala Ile Ala Leu Ser Lys
    210                 215                 220
Asn Ile Lys Pro Leu Ile Pro Thr Lys Val Asn Leu Glu Ile Glu Val
225                 230                 235                 240
Asp Gln Lys Lys Ile Phe Lys Leu Arg Ser Ala Asp Thr Ala Ser Leu
                245                 250                 255
Ser His Glu Asp Lys Asn Val Thr Asn Ile Thr Gln Asp Asp Leu Asp
            260                 265                 270
Phe Ile Lys Asn Leu Glu Ser Lys Arg Ser Ser Ile Asp Ser Phe Ile
        275                 280                 285
Lys Glu Ile Asp Tyr Val Lys Arg Asp Trp Thr Asn Cys Asp Lys Phe
    290                 295                 300
Asp His Tyr Ser Lys Asp Leu Val Leu Ser Thr Thr Asp Trp Asp Asp
305                 310                 315                 320
Asp Ala Ile Ile Asn Ala Gly Asp Asn Glu Tyr Ser Ile Val Lys Pro
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Ile Asn Glu Leu Leu Leu Asn Asn Pro Leu Asp Asn Ser Lys Gln Asn
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Gln Ile Asn Leu Asp Lys Leu Lys Leu Asp Met Asn Asp Pro Asn Leu
385                 390                 395                 400
Leu Phe Val Pro Ser Lys Lys Val Asp Ala Thr Lys Ser Val Val Pro
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Ser Thr Asp Lys Leu Leu Glu Leu Lys Phe Asn Ile Ser Asn Asp Gln
            420                 425                 430
Glu Tyr Glu Leu Leu Arg Lys Asn Tyr Asn Thr Lys Gln Arg Ser Gln
        435                 440                 445
Leu Ser Asn Leu Asn Ile Glu His Ser Val Pro Ala Leu Arg Leu Gln
    450                 455                 460
Thr Pro Tyr Tyr Lys Val Lys Leu Ser Thr Asp Glu Thr Arg Ser Phe
465                 470                 475                 480
His Arg Pro Val Phe Asn Val Arg Pro Gly Thr Leu Val Ser Phe Ser
                485                 490                 495
Lys Leu Lys Leu Arg Lys Arg Lys Lys Asp Lys Gly Lys Ser Leu Gln
            500                 505                 510
Gln Ile Phe Ser Lys Thr Ser Asp Leu Thr Val Ala Asp Thr Gly Asn
        515                 520                 525
Ile Ile Ala Leu Glu Tyr Ser Glu Gln Tyr Pro Pro Ile Leu Ser Asn
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Phe Gly Met Gly Ser Lys Leu Ile Asn Tyr Tyr Arg Lys Glu Arg Pro
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Asn Asp Thr Ser Arg Pro Lys Ala Gln Ile Gly Glu Thr His Ile Leu
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Gly Val Glu Asp Arg Ser Pro Phe Trp Asn Phe Gly Glu Val Ala Pro
            580                 585                 590
Gly Asp Phe Val Pro Thr Leu Tyr Asn Asn Met Val Arg Ala Pro Ile
        595                 600                 605
Phe Lys His Asp Asn Lys Pro Thr Asp Phe Leu Leu Val Lys Ser Gln
    610                 615                 620
Gly Ala Gly Ser His Gln Lys Phe Tyr Leu Arg Gly Ile Asn Phe Asn
625                 630                 635                 640
Phe Ala Val Gly Asn Thr Phe Pro Val Glu Val Pro Ala Pro His Ser
                645                 650                 655
Arg Lys Val Thr Asn Ile Ser Lys Asn Arg Leu Lys Met Val Val Phe
            660                 665                 670
Arg Val Met Asn Ser Leu Gly Val Pro Arg Ile Ser Val Lys Asp Val
        675                 680                 685
Ser Lys His Phe Pro Glu His Ser Asp Met Gln Asn Arg Gln Arg Leu
    690                 695                 700
Lys Glu Phe Met Glu Tyr Gln Arg Gln Gly Glu Asp Gln Gly Tyr Trp
705                 710                 715                 720
Lys Val Arg Gly Leu Asn Asp Val Ile Pro Gly Glu Glu Glu Ile Arg
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Thr Met Ile Thr Pro Glu Asp Ser Ser Leu Met Asp Thr Met Gln Phe
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Gly Gln Gln Val Leu Asp Asp Asn Met Val Leu Phe Gly Glu Gln Ser
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Arg Gln Glu Ser Ser Arg Ser Arg Lys Gly Asp Lys Arg Glu Asp Ser
    770                 775                 780
Ile Ala Asp Asp Ala Glu Asn Gly Asp Asp Ile Asn Lys Asp Lys Glu
785                 790                 795                 800
Lys Glu Val Glu Lys Glu Lys Glu Gln Glu Arg Glu Glu Glu Lys Gly
                805                 810                 815
Lys Asp Lys Glu Lys Asp Lys Asp Lys Glu Lys Asp Lys Thr Glu Lys
            820                 825                 830
Glu Lys Ser Lys Lys Ser Lys Glu Gln Asp Thr Glu Ile Asp Val Glu
        835                 840                 845
Glu Glu Leu Ala Pro Trp Asn Leu Ser Arg Asn Phe Val Ile Ala Asn
    850                 855                 860
Gln Thr Lys Thr Met Leu Gln Leu Asn Gly Glu Gly Asp Pro Thr Gly
865                 870                 875                 880
Ile Gly Leu Gly Phe Ser Met Leu Arg Ala Thr Gln Lys Asn Pro Phe
                885                 890                 895
Lys Pro Leu Phe Thr Pro Pro Pro Glu Asn Val Pro Lys Ser Asn Ala
            900                 905                 910
Ala Ala His Asn Gln Lys Leu Tyr Glu Gln Glu Ile Lys Arg Ile Trp
        915                 920                 925
Tyr Ser Gln Arg Ser Ser Leu Val Asp His Gly Glu Gly Thr Glu Ser
    930                 935                 940
Lys Leu Gln Gln Ile Tyr Asn Glu Tyr Pro Pro Ala Asp His Glu Leu
945                 950                 955                 960
Tyr Leu Lys Asn Lys Leu Glu Gln Asp Gln Gln Val Gln Gln Gln Gln
                965                 970                 975
Gln Asp Pro Ser Leu Gln Ala Asp Gln Gln Gln Gln Gln Gln Gln Gln
            980                 985                 990
Gln Asn Arg Val Leu Arg Ile Thr Arg Arg Val Arg Asp Glu Asn Gly
        995                 1000                1005
Ile Val His Arg Lys Val Glu Phe Ile His Asp Pro Arg Leu Ile Arg
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Ala Tyr Val Lys Arg Lys Lys Gln Ile Glu Asp Glu Leu Leu Lys Asn
1025                1030                1035                104
Ala Asp Val Asp Glu Ile Leu Pro Thr Asn Asp Lys Glu Leu Asn Lys
                1045                1050                1055
Ile Arg Arg Lys Ala Leu Glu Glu Lys Leu Ala Asn Leu Glu Lys Arg
            1060                1065                1070
Ala Lys Gln Ser Arg Ala Lys Lys Pro Pro Lys Asp Leu Ile His Ala
        1075                1080                1085
Ala Ala Ala Ala Gly Ala Thr Ile Ile Asp Ala Asn Thr Val Met Leu
    1090                1095                1100
Pro Asp Gly Ser Tyr Val Ile Gly Gly Lys Gly Ile Gly Lys Gly Lys
1105                1110                1115                112
Ser Arg Thr Arg Arg Cys Lys Asn Cys Gly Ala Tyr Gly His Ile Arg
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<211> 1066
<212> PRT
<213> S. cerevisiae

<400> 3

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Gly Ser Tyr Ile Gly Gly Asp Glu Gly Ala Asn Ser Lys Asp Tyr Thr
        35                  40                  45
Glu His Leu Pro Asp Ala Val Asp Phe Glu Asp Glu Asp Glu Leu Ala
    50                  55                  60
Asp Asp Asp Asp Asp Leu Pro Glu Glu Ser Asp Ala Asn Leu His Pro
65                  70                  75                  80
Ala Met Met Thr Met Gly Ala Tyr Asp Asp Val Asn Glu Asn Gly Ala
                85                  90                  95
Val Leu Gly Ile Asp Ser Asn Ser Leu Asn Met Gln Leu Pro Glu Ile
            100                 105                 110
Asn Gly Asp Leu Ser Gln Gln Phe Ile Leu Glu Asp Asp Gly Gly Thr
        115                 120                 125
Pro Ala Thr Ser Asn Ala Leu Phe Met Gly Met Asp Ala Asn Glu Ile
    130                 135                 140
His Leu Ala Thr Glu Thr Gly Val Leu Asp Gly Ser Gly Ala Asn Glu
145                 150                 155                 160
Ile Gly His Ser Gln Leu Ser Ile Gly Gly Val Asn Gly Asn Asp Met
                165                 170                 175
Ser Ile Asn Gly Gly Phe Ile Met Glu Pro Asp Met Ser Asp Gly Lys
            180                 185                 190
His Lys Lys Ala Thr Lys Leu Asp Leu Ile Asn His Glu Lys Tyr Leu
        195                 200                 205
Leu Lys Lys Tyr Phe Pro Asp Phe Glu Lys Gly Lys Ile Leu Lys Trp
    210                 215                 220
Asn Lys Leu Ile Tyr Arg Arg Ser Val Pro Tyr His Trp His Ser Glu
225                 230                 235                 240
Ile Ser Arg Val Lys Lys Pro Phe Met Pro Leu Asn Leu Lys Phe Lys
                245                 250                 255
Val Gln Gln Asp Asp Lys Arg Leu Phe Asn Ser Arg Thr Ile Ser Tyr
            260                 265                 270
Val Ala Pro Ile Tyr Gln Gly Lys Asn Asn Leu Leu Gln Ser Asn Ser
        275                 280                 285
Ser Ala Ser Arg Arg Gly Leu Ile His Val Ser Ile Asp Glu Leu Phe
    290                 295                 300
Pro Ile Lys Glu Gln Gln Lys Lys Arg Lys Ile Ile His Asp Glu Lys
305                 310                 315                 320
Thr Ile Ser Glu Asp Leu Leu Ile Ala Thr Asp Asp Trp Asp Gln Glu
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Ser Met Thr Pro Asn Leu Lys Phe Ser Gly Gly Tyr Lys Leu Lys Ser
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Leu Ile Glu Asp Val Ala Glu Asp Trp Gln Trp Asp Glu Asp Met Ile
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Ile Asp Ala Lys Leu Lys Glu Ser Lys His Ala Glu Leu Asn Met Asn
385                 390                 395                 400
Asp Glu Lys Leu Leu Leu Met Ile Glu Lys Thr Asn Asn Leu Ala Gln
                405                 410                 415
Gln Lys Gln Gln Leu Asp Ser Ser Asn Leu Ile Leu Pro Leu Asn Glu
            420                 425                 430
Thr Ile Leu Gln Gln Lys Phe Asn Leu Ser Asn Asp Asp Lys Tyr Gln
        435                 440                 445
Ile Leu Lys Lys Thr His Gln Thr Lys Val Arg Ser Thr Ile Ser Asn
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Leu Asn Ile Gln His Ser Gln Pro Ala Ile Asn Leu Gln Ser Pro Phe
465                 470                 475                 480
Tyr Lys Val Ala Val Pro Arg Tyr Gln Leu Arg His Phe His Arg Glu
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Asn Phe Gly Ser His Ile Arg Pro Gly Thr Lys Ile Val Phe Ser Lys
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Leu Lys Ala Arg Lys Arg Lys Arg Asp Lys Gly Lys Asp Val Lys Glu
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Ser Phe Ser Thr Ser Gln Asp Leu Thr Ile Gly Asp Thr Ala Pro Val
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Tyr Leu Met Glu Tyr Ser Glu Gln Thr Pro Val Ala Leu Ser Lys Phe
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Gly Met Ala Asn Lys Leu Ile Asn Tyr Tyr Arg Lys Ala Asn Glu Gln
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Asp Thr Leu Arg Pro Lys Leu Pro Val Gly Glu Thr His Val Leu Gly
            580                 585                 590
Val Gln Asp Lys Ser Pro Phe Trp Asn Phe Gly Phe Val Glu Pro Gly
        595                 600                 605
His Ile Val Pro Thr Leu Tyr Asn Asn Met Ile Arg Ala Pro Val Phe
    610                 615                 620
Lys His Asp Ile Ser Gly Thr Asp Phe Leu Leu Thr Lys Ser Ser Gly
625                 630                 635                 640
Phe Gly Ile Ser Asn Arg Phe Tyr Leu Arg Asn Ile Asn His Leu Phe
                645                 650                 655
Thr Val Gly Gln Thr Phe Pro Val Glu Glu Ile Pro Gly Pro Asn Ser
            660                 665                 670
Arg Lys Val Thr Ser Met Lys Ala Thr Arg Leu Lys Met Ile Ile Tyr
        675                 680                 685
Arg Ile Leu Asn His Asn His Ser Lys Ala Ile Ser Ile Asp Pro Ile
    690                 695                 700
Ala Lys His Phe Pro Asp Gln Asp Tyr Gly Gln Asn Arg Gln Lys Val
705                 710                 715                 720
Lys Glu Phe Met Lys Tyr Gln Arg Asp Gly Pro Glu Lys Gly Leu Trp
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Leu Gln Phe Gln Glu Asp Asn Glu Ala Tyr Asn Phe Asp Ser Lys Leu
    770                 775                 780
Lys Ser Leu Glu Glu Asn Leu Leu Pro Trp Asn Ile Thr Lys Asn Phe
785                 790                 795                 800
Ile Asn Ser Thr Gln Met Arg Ala Met Ile Gln Ile His Gly Val Gly
                805                 810                 815
Asp Pro Thr Gly Cys Gly Glu Gly Phe Ser Phe Leu Lys Thr Ser Met
            820                 825                 830
Lys Gly Gly Phe Val Lys Ser Gly Ser Pro Ser Ser Asn Asn Asn Ser
        835                 840                 845
Ser Asn Lys Lys Gly Thr Asn Thr His Ser Tyr Asn Val Ala Gln Gln
    850                 855                 860
Gln Lys Ala Tyr Asp Glu Glu Ile Ala Lys Thr Trp Tyr Thr His Thr
865                 870                 875                 880
Lys Ser Leu Ser Ile Ser Asn Pro Phe Glu Glu Met Thr Asn Pro Asp
                885                 890                 895
Glu Ile Asn Gln Thr Asn Lys His Val Lys Thr Asp Arg Asp Asp Lys
            900                 905                 910
Lys Ile Leu Lys Ile Val Arg Lys Lys Arg Asp Glu Asn Gly Ile Ile
        915                 920                 925
Gln Arg Gln Thr Ile Phe Ile Arg Asp Pro Arg Val Ile Gln Gly Tyr
    930                 935                 940
Ile Lys Ile Lys Glu Gln Asp Lys Glu Asp Val Asn Lys Leu Leu Glu
945                 950                 955                 960
Glu Asp Thr Ser Lys Ile Asn Asn Leu Glu Glu Leu Glu Lys Gln Lys
                965                 970                 975
Lys Leu Leu Gln Leu Glu Leu Ala Asn Leu Glu Lys Ser Gln Gln Arg
            980                 985                 990
Arg Ala Ala Arg Gln Asn Ser Lys Arg Asn Gly Gly Ala Thr Arg Thr
        995                 1000                1005
Glu Asn Ser Val Asp Asn Gly Ser Asp Leu Ala Gly Val Thr Asp Gly
    1010                1015                1020
Lys Ala Ala Arg Asn Lys Gly Lys Asn Thr Thr Arg Arg Cys Ala Thr
1025                1030                1035                104
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<211> 979
<212> PRT
<213> S. pombe

<400> 4

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Asp Met Ser Val Ile Asn Ser Leu Leu Gly Asp Thr Asn Asn Pro Gly
        35                  40                  45
Met Asn Glu Ser Pro Lys Ile Leu Asp Ser Ser Phe Glu Asn Ser Asn
    50                  55                  60
Pro Gln Asp Gly Pro Asn Tyr Glu Asp Phe Asp Phe Met Gly Ser Ile
65                  70                  75                  80
His Lys Glu Phe Gly Asn Asn Ile Asn Glu Met Asp Asp Met Glu Asp
                85                  90                  95
Val Ser Asp Asp Asn Leu Pro Glu Glu Glu Gln Ala Val Asn Tyr Thr
            100                 105                 110
Gly Asp Lys Asp Asp Glu Asp Phe Gly Lys Leu Leu Ala Lys Glu Met
        115                 120                 125
Gly Glu Glu Ala Ala Gly Gln Val Leu Ser Gly Val Gly Phe Ser Ile
    130                 135                 140
Pro Ser Gly Leu Val Pro Pro Ser Glu Pro Ser Lys Thr Val Ser Ser
145                 150                 155                 160
Thr Thr Glu Glu Leu Gln Asn Glu Ala Gln Ile Arg Glu Ser Ile Val
                165                 170                 175
Lys Thr Phe Phe Pro Thr Phe Glu Arg Gly Val Leu Leu Asn Phe Ser
            180                 185                 190
Glu Leu Phe Lys Pro Lys Pro Val Lys Leu Ala Pro Pro Lys Lys Lys
        195                 200                 205
Thr Pro Lys Val Cys Val Pro Gly Arg Leu Thr Leu Glu Val Asp Thr
    210                 215                 220
Asp Tyr Ala Ile Ile Phe Asn Ser Lys Lys Ser Leu Pro Leu Lys Arg
225                 230                 235                 240
Asn Val Val Ser Pro Ile Ser Thr His Thr Lys Lys Arg Arg Arg Thr
                245                 250                 255
Ala Asn Thr Ser Gln Arg Asn Asp Gly Leu Asp Leu Asn Thr Val Phe
            260                 265                 270
Thr Thr Asn Asp Trp Glu Lys Asn Ile Ile Tyr Asp Glu Ser Asp Val
        275                 280                 285
Asn Lys Thr Asn Gln Ser Ser Phe Phe Ile Asp Lys Ser Leu Val Asp
    290                 295                 300
Ile Asp Phe Ala Phe Asp Glu Asn Ile Phe Asp Gly Asp Thr Gly Thr
305                 310                 315                 320
Ser Lys Val Val Leu Asn Leu Asn Asp Pro Lys Leu Leu Leu Gln Pro
                325                 330                 335
Gln Leu Pro Lys Lys Glu Asp Ser Gln Arg Ser Phe Ala Asp Thr His
            340                 345                 350
Gln Arg Asn Ser Leu Ala Trp Lys Phe Asn Ile Ser Asn Asp Pro Ala
        355                 360                 365
Tyr Glu Met Leu Lys Gln Asn His Gln Ser Lys Val Arg Asn Thr Leu
    370                 375                 380
Ser Gln Leu Ala Ile Glu His Ala Ala Phe Ala Glu Lys Leu Thr Phe
385                 390                 395                 400
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Asn Ala Gln Lys Arg Gly Leu Ser Ile Asn Asn Leu Glu Glu Leu Ala
                805                 810                 815
Lys Lys Tyr Gly Ile Asn Ser Ile His Asp Asp Tyr Val Glu Ser Asn
            820                 825                 830
Glu Glu Thr Thr Arg Glu Glu Thr Pro Ser Ser Asp Lys Val Leu Arg
        835                 840                 845
Ile Val Arg Leu Tyr Arg Asp Lys Asn Gly Asn Leu Glu Arg Lys Gln
    850                 855                 860
Glu Thr Ile His Asp Pro Ile Val Ile His Ala Tyr Leu Lys Lys Arg
865                 870                 875                 880
Arg Glu Ile Asp Glu Gln Ser Thr Ala Leu Asp Ala Val Val Pro Thr
                885                 890                 895
Gly Asp Glu Ala Ile Asp Arg Arg Asn Arg Arg Arg Leu Glu Gln Glu
            900                 905                 910
Leu Ala Lys Ser Gln Lys Asn Trp Glu Arg Arg Arg Ala Arg His Ala
        915                 920                 925
Ala Lys Glu Gly Ile Asn Leu Asn Gly Glu Gly Arg Lys Pro Thr Thr
    930                 935                 940
Arg Lys Cys Ser Asn Cys Gly Gln Val Gly His Met Lys Thr Asn Lys
945                 950                 955                 960
Ile Cys Pro Leu Phe Gly Arg Pro Glu Gly Gly Leu Ala Thr Met Leu
                965                 970                 975
Asp Lys Asn
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<400> 5

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Asp Leu Thr Gly Ile Leu Phe Gly Asn Ile Asp Ser Glu Gly Arg Leu
            20                  25                  30
Leu Gln Asp Asp Asp Gly Glu Gly Arg Gly Gly Thr Gly Phe Asp Ala
        35                  40                  45
Glu Leu Arg Glu Asn Ile Gly Ser Leu Ser Lys Leu Gly Leu Asp Ser
    50                  55                  60
Met Leu Leu Glu Val Ile Asp Leu Lys Glu Ala Glu Pro Pro Ser Asp
65                  70                  75                  80
Asp Glu Glu Glu Glu Asp Ala Arg Pro Ser Ala Val Ser Ala Ser Gly
                85                  90                  95
Gly Met Ser Ala Phe Asp Ala Leu Lys Ala Gly Val Lys Arg Glu Glu
            100                 105                 110
Arg Glu Asp Gly Ala Val Lys Ala Gln Asp Asp Ala Ile Asp Tyr Ser
        115                 120                 125
Asp Ile Thr Glu Leu Ser Glu Asp Cys Pro Arg Thr Pro Pro Glu Glu
    130                 135                 140
Thr Ser Thr Tyr Asp Asp Leu Glu Asp Ala Ile Pro Ala Ser Lys Val
```

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Pro Tyr Tyr Lys Thr Arg Leu Ser Lys Arg Ala Val Arg Ser Tyr His
                405                 410                 415
Arg Pro Thr Met Ser Phe Lys Pro Asn Ala Ala Ile Val Phe Ser Pro
            420                 425                 430
Leu Ile Val Arg Lys Arg Ser Lys Asp Lys His Lys Ser Glu Arg Glu
        435                 440                 445
Leu Ile Pro Thr Thr Lys Glu Ile Thr Met Gly Asp Thr Thr His Ala
    450                 455                 460
Ile Leu Val Glu Phe Ser Glu Glu His Pro Ala Val Leu Ser Asn Ala
465                 470                 475                 480
Gly Met Ala Ser Arg Ile Val Asn Tyr Tyr Arg Lys Lys Asn Glu Gln
                485                 490                 495
Asp Glu Ser Arg Pro Lys Leu Glu Val Gly Glu Ser His Val Leu Asp
            500                 505                 510
Val Gln Asp Arg Ser Pro Phe Trp Asn Phe Gly Ser Val Glu Pro Gly
        515                 520                 525
Glu Ile Thr Pro Thr Leu Tyr Asn Lys Met Ile Arg Ala Pro Leu Phe
    530                 535                 540
Lys His Glu Val Pro Pro Thr Asp Phe Ile Leu Ile Arg Asn Ser Ser
545                 550                 555                 560
Ser Tyr Gly Ser Lys Tyr Tyr Leu Lys Asn Ile Asn His Met Phe Val
                565                 570                 575
Ser Gly Gln Thr Phe Pro Val Thr Asp Val Pro Gly Pro His Ser Arg
            580                 585                 590
Lys Val Thr Thr Ala Ser Lys Asn Arg Leu Lys Met Leu Val Phe Arg
        595                 600                 605
Leu Ile Arg Arg Ser Pro Asn Gly Gly Leu Phe Ile Arg Gln Leu Ser
    610                 615                 620
Lys His Phe Ser Asp Gln Asn Glu Met Gln Ile Arg Gln Arg Leu Lys
625                 630                 635                 640
Glu Phe Met Glu Tyr Lys Lys Lys Gly Asp Gly Pro Gly Tyr Trp Lys
                645                 650                 655
Leu Lys Ser Asn Glu Val Val Pro Asp Glu Ala Gly Thr Arg Ser Met
            660                 665                 670
Val Ser Pro Glu Thr Val Cys Leu Leu Glu Ser Met Gln Val Gly Val
        675                 680                 685
Arg Gln Leu Glu Asp Ala Gly Tyr Gly Lys Thr Met Asp Glu Ile Asn
    690                 695                 700
Asp Asp Glu Asp Glu Glu Gln Pro Ala Glu Gln Leu Leu Ala Pro Trp
705                 710                 715                 720
Ile Thr Thr Arg Asn Phe Ile Asn Ala Thr Gln Gly Lys Ala Met Leu
                725                 730                 735
Thr Leu Phe Gly Glu Gly Asp Pro Thr Gly Ile Gly Glu Gly Tyr Ser
            740                 745                 750
Phe Ile Arg Thr Ser Met Lys Gly Gly Phe Lys Pro Ala Gly Glu Thr
        755                 760                 765
Ala Asp Asp Lys Pro Glu Pro Gln Thr Lys Asn Ala His Ala Tyr Asn
    770                 775                 780
Val Ala Lys Gln Gln Arg Ala Tyr Glu Glu Glu Ile Asn Arg Ile Trp
785                 790                 795                 800
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145                 150                 155                 160
Glu Ala Lys Leu Thr Lys Asp Asp Lys Glu Leu Met Pro Pro Pro Ser
                165                 170                 175
Ala Pro Met Arg Ser Gly Ser Gly Gly Gly Ile Glu Glu Pro Ala Lys
            180                 185                 190
Ser Asn Asp Ala Ser Ser Pro Ser Asp Asp Ser Lys Ser Thr Asp Ser
        195                 200                 205
Lys Asp Ala Asp Arg Lys Leu Asp Thr Pro Leu Ala Asp Ile Leu Pro
    210                 215                 220
Ser Lys Tyr Gln Asn Val Asp Val Arg Glu Leu Phe Pro Asp Phe Arg
225                 230                 235                 240
Pro Gln Lys Val Leu Arg Phe Ser Arg Leu Phe Gly Pro Gly Lys Pro
                245                 250                 255
Thr Ser Leu Pro Gln Ile Trp Arg His Val Arg Lys Arg Arg Arg Lys
            260                 265                 270
Arg Asn Gln Ser Arg Asp Gln Lys Thr Thr Asn Thr Gly Gly Ser Asp
        275                 280                 285
Ser Pro Ser Asp Thr Glu Glu Pro Arg Lys Arg Gly Phe Ser Leu His
    290                 295                 300
Tyr Ala Ala Glu Pro Thr Pro Ala Glu Cys Met Ser Asp Asp Glu Asp
305                 310                 315                 320
Lys Leu Leu Gly Asp Phe Asn Ser Glu Asp Val Arg Pro Glu Gly Pro
                325                 330                 335
Asp Asn Gly Glu Asn Ser Asp Gln Lys Pro Lys Val Ala Asp Trp Arg
            340                 345                 350
Phe Gly Pro Ala Gln Ile Trp Tyr Asp Ile Leu Glu Val Pro Asp Ser
        355                 360                 365
Gly Glu Gly Phe Asn Tyr Gly Phe Lys Thr Lys Ala Ala Ser Thr Ser
    370                 375                 380
Ser Gln Gln Gln Leu Lys Asp Glu Arg Arg Val Lys Ser Pro Glu Asp
385                 390                 395                 400
Asp Val Glu Asp Pro Ser Ile Ala Asp Asp Ala Phe Leu Met Val Ser
                405                 410                 415
Gln Leu His Trp Glu Asp Asp Val Val Trp Asp Gly Asn Asp Ile Lys
            420                 425                 430
Ala Lys Val Leu Gln Lys Leu Asn Ser Lys Thr Asn Ala Ala Gly Trp
        435                 440                 445
Leu Pro Ser Ser Gly Ser Arg Thr Ala Gly Ala Phe Ser Gln Pro Gly
    450                 455                 460
Lys Pro Ser Met Pro Val Gly Ser Gly Ser Ser Lys Gln Gly Ser Gly
465                 470                 475                 480
Ala Ser Ser Lys Lys Ala Gln Gln Asn Ala Gln Ala Lys Pro Ala Glu
                485                 490                 495
Ala Pro Asp Asp Thr Trp Tyr Ser Leu Phe Pro Val Glu Asn Glu Glu
            500                 505                 510
Leu Ile Tyr Tyr Lys Trp Glu Asp Glu Val Ile Trp Asp Ala Gln Gln
        515                 520                 525
Val Ser Lys Val Pro Lys Pro Lys Val Leu Thr Leu Asp Pro Asn Asp
    530                 535                 540
Glu Asn Ile Ile Leu Gly Ile Pro Asp Asp Ile Asp Pro Ser Lys Ile
```

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545                 550                 555                 560
Asn Lys Ser Thr Gly Pro Pro Pro Lys Ile Lys Ile Pro His Pro His
                565                 570                 575
Val Lys Lys Ser Lys Ile Leu Leu Gly Lys Ala Gly Val Ile Asn Val
            580                 585                 590
Leu Ala Glu Asp Thr Pro Pro Pro Pro Pro Lys Ser Pro Asp Arg Asp
        595                 600                 605
Pro Phe Asn Ile Ser Asn Asp Thr Tyr Tyr Thr Pro Lys Thr Glu Pro
    610                 615                 620
Thr Leu Arg Leu Lys Val Gly Gly Asn Leu Ile Gln His Ser Thr Pro
625                 630                 635                 640
Val Val Glu Leu Arg Ala Pro Phe Val Pro Thr His Met Gly Pro Met
                645                 650                 655
Asn Val Arg Ala Phe His Arg Pro Pro Leu Lys Lys Tyr Ser His Gly
            660                 665                 670
Pro Met Ala Gln Ser Ile Pro His Pro Val Phe Pro Leu Leu Lys Thr
        675                 680                 685
Ile Ala Lys Lys Ala Lys Gln Arg Glu Val Glu Arg Ile Ala Ser Gly
    690                 695                 700
Gly Gly Asp Val Phe Phe Met Arg Asn Pro Glu Asp Leu Ser Gly Arg
705                 710                 715                 720
Asp Gly Asp Ile Val Leu Ala Glu Phe Cys Glu Glu His Pro Pro Leu
                725                 730                 735
Ile Asn Gln Val Gly Met Cys Ser Lys Ile Lys Asn Tyr Tyr Lys Arg
            740                 745                 750
Lys Ala Glu Lys Asp Ser Gly Pro Gln Asp Tyr Val Tyr Gly Glu Val
        755                 760                 765
Ala Phe Ala His Thr Ser Pro Phe Leu Gly Ile Leu His Pro Gly Gln
    770                 775                 780
Cys Ile Gln Ala Ile Glu Asn Asn Met Tyr Arg Ala Pro Ile Tyr Pro
785                 790                 795                 800
His Lys Met Ala His Asn Asp Phe Leu Val Ile Arg Thr Arg Asn Asn
                805                 810                 815
Tyr Trp Ile Arg Ser Val Asn Ser Ile Tyr Thr Val Gly Gln Glu Cys
            820                 825                 830
Pro Leu Tyr Glu Val Pro Gly Pro Asn Ser Lys Arg Ala Asn Asn Phe
        835                 840                 845
Thr Arg Asp Phe Leu Gln Val Phe Ile Tyr Arg Leu Phe Trp Lys Ser
    850                 855                 860
Arg Asp Asn Pro Arg Arg Ile Arg Met Asp Asp Ile Lys Gln Ala Phe
865                 870                 875                 880
Pro Ala His Ser Glu Ser Ser Ile Arg Lys Arg Leu Lys Gln Cys Ala
                885                 890                 895
Asp Phe Lys Arg Thr Gly Met Asp Ser Asn Trp Trp Val Ile Lys Pro
            900                 905                 910
Glu Phe Arg Leu Pro Ser Glu Glu Glu Ile Arg Ala Met Val Ser Pro
        915                 920                 925
Glu Gln Cys Cys Ala Tyr Phe Ser Met Ile Ala Ala Glu Gln Arg Leu
    930                 935                 940
Lys Asp Ala Gly Tyr Gly Glu Lys Phe Leu Phe Ala Pro Gln Glu Asp
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945 950 955 960
Asp Asp Glu Glu Ala Gln Leu Lys Leu Asp Asp Glu Val Lys Val Ala
965 970 975
Pro Trp Asn Thr Thr Arg Ala Tyr Ile Gln Ala Met Arg Gly Lys Cys
980 985 990
Leu Leu Gln Leu Ser Gly Pro Ala Asp Pro Thr Gly Cys Gly Glu Gly
995 1000 1005
Phe Ser Tyr Val Arg Val Pro Asn Lys Pro Thr Gln Thr Lys Glu Glu
1010 1015 1020
Gln Glu Ser Gln Pro Lys Arg Ser Val Thr Gly Thr Asp Ala Asp Leu
1025 1030 1035 104
Arg Arg Leu Pro Leu Gln Arg Ala Lys Glu Leu Leu Arg Gln Phe Lys
1045 1050 1055
Val Pro Glu Glu Glu Ile Lys Lys Leu Ser Arg Trp Glu Val Ile Asp
1060 1065 1070
Val Val Arg Thr Leu Ser Thr Glu Lys Ala Lys Ala Gly Glu Glu Gly
1075 1080 1085
Met Asp Lys Phe Ser Arg Gly Asn Arg Phe Ser Ile Ala Glu His Gln
1090 1095 1100
Glu Arg Tyr Lys Glu Glu Cys Gln Arg Ile Phe Asp Leu Gln Asn Arg
1105 1110 1115 112
Val Leu Ala Ser Ser Glu Val Leu Ser Thr Asp Glu Ala Glu Ser Ser
1125 1130 1135
Ala Ser Glu Glu Ser Asp Leu Glu Glu Leu Gly Lys Asn Leu Glu Asn
1140 1145 1150
Met Leu Ser Asn Lys Lys Thr Ser Thr Gln Leu Ser Arg Glu Arg Glu
1155 1160 1165
Glu Leu Glu Arg Gln Glu Leu Leu Arg Gln Leu Asp Glu Glu His Gly
1170 1175 1180
Gly Pro Ser Gly Ser Gly Gly Ala Lys Gly Ala Lys Gly Lys Asp Asp
1185 1190 1195 120
Pro Gly Gln Gln Met Leu Ala Thr Asn Asn Gln Gly Arg Ile Leu Arg
1205 1210 1215
Ile Thr Arg Thr Phe Arg Gly Asn Asp Gly Lys Glu Tyr Thr Arg Val
1220 1225 1230
Glu Thr Val Arg Arg Gln Pro Val Ile Asp Ala Tyr Ile Lys Ile Arg
1235 1240 1245
Thr Thr Lys Asp Glu Gln Phe Ile Lys Gln Phe Ala Thr Leu Asp Glu
1250 1255 1260
Gln Gln Lys Glu Glu Met Lys Arg Glu Lys Arg Arg Ile Gln Glu Gln
1265 1270 1275 128
Leu Arg Arg Ile Lys Arg Asn Gln Glu Arg Glu Arg Leu Ala Gln Leu
1285 1290 1295
Ala Gln Asn Gln Lys Leu Gln Pro Gly Gly Met Pro Thr Ser Leu Gly
1300 1305 1310
Asp Pro Lys Ser Ser Gly Gly His Ser His Lys Glu Arg Asp Ser Gly
1315 1320 1325
Tyr Lys Glu Val Ser Pro Ser Arg Lys Lys Phe Lys Leu Lys Pro Asp
1330 1335 1340
Leu Lys Leu Lys Cys Gly Ala Cys Gly Gln Val Gly His Met Arg Thr

1345 1350 1355 136
Asn Lys Ala Cys Pro Leu Tyr Ser Gly Met Gln Ser Ser Leu Ser Gln
1365 1370 1375
Ser Asn Pro Ser Leu Ala Asp Asp Phe Asp Glu Gln Ser Glu Lys Glu
1380 1385 1390
Met Thr Met Asp Asp Asp Asp Leu Val Asn Val Asp Gly Thr Lys Val
1395 1400 1405
Thr Leu Ser Ser Lys Ile Leu Lys Arg His Gly Gly Asp Asp Gly Lys
1410 1415 1420
Arg Arg Ser Gly Ser Ser Ser Gly Phe Thr Leu Lys Val Pro Arg Asp
1425 1430 1435 144
Ala Met Gly Lys Lys Lys Arg Arg Val Gly Gly Asp Leu His Cys Asp
1445 1450 1455
Tyr Leu Gln Arg His Asn Lys Thr Ala Asn Arg Arg Arg Thr Asp Pro
1460 1465 1470
Val Val Val Leu Ser Ser Ile Leu Glu Ile Ile His Asn Glu Leu Arg
1475 1480 1485
Ser Met Pro Asp Val Ser Pro Phe Leu Phe Pro Val Ser Ala Lys Lys
1490 1495 1500
Val Pro Asp Tyr Tyr Arg Val Val Thr Lys Pro Met Asp Leu Gln Thr
1505 1510 1515 152
Met Arg Glu Tyr Ile Arg Gln Arg Arg Tyr Thr Ser Arg Glu Met Phe
1525 1530 1535
Leu Glu Asp Leu Lys Gln Ile Val Asp Asn Ser Leu Ile Tyr Asn Gly
1540 1545 1550
Pro Gln Ser Ala Tyr Thr Leu Ala Ala Gln Arg Met Phe Ser Ser Cys
1555 1560 1565
Phe Glu Leu Leu Ala Glu Arg Glu Asp Lys Leu Met Arg Leu Glu Lys
1570 1575 1580
Ala Ile Asn Pro Leu Leu Asp Asp Asp Asp Gln Val Ala Leu Ser Phe
1585 1590 1595 160
Ile Phe Asp Lys Leu His Ser Gln Ile Lys Gln Leu Pro Glu Ser Trp
1605 1610 1615
Pro Phe Leu Lys Pro Val Asn Lys Lys Gln Val Lys Asp Tyr Tyr Thr
1620 1625 1630
Val Ile Lys Arg Pro Met Asp Leu Glu Thr Ile Gly Lys Asn Ile Glu
1635 1640 1645
Ala His Arg Tyr His Ser Arg Ala Glu Tyr Leu Ala Asp Ile Glu Leu
1650 1655 1660
Ile Ala Thr Asn Cys Glu Gln Tyr Asn Gly Ser Asp Thr Arg Tyr Thr
1665 1670 1675 168
Lys Phe Ser Lys Lys Ile Leu Glu Tyr Ala Gln Thr Gln Leu Ile Glu
1685 1690 1695
Phe Ser Glu His Cys Gly Gln Leu Glu Asn Asn Ile Ala Lys Thr Gln
1700 1705 1710
Glu Arg Ala Arg Glu Asn Ala Pro Glu Phe Asp Glu Ala Trp Gly Asn
1715 1720 1725
Asp Asp Tyr Asn Phe Asp Arg Gly Ser Arg Ala Ser Ser Pro Gly Asp
1730 1735 1740
Asp Tyr Ile Asp Val Glu Gly His Gly Gly His Ala Ser Ser Ser Asn

1745 1750 1755 176
Ser Ile His Arg Ser Met Gly Ala Glu Ala Gly Ser Ser His Thr Ala
1765 1770 1775
Pro Ala Val Arg Lys Pro Ala Pro Pro Gly Pro Gly Glu Val Lys Arg
1780 1785 1790
Gly Arg Gly Arg Pro Arg Lys Gln Arg Asp Pro Val Glu Glu Asp Leu
1795 1800 1805
Gln Cys Ser Thr Asp Asp Glu Asp Asp Asp Glu Glu Glu Asp Phe Gln
1810 1815 1820
Glu Val Ser Glu Asp Glu Asn Asn Ala Ala Ser Ile Leu Asp Gln Gly
1825 1830 1835 184
Glu Arg Ile Asn Ala Pro Ala Asp Ala Met Asp Gly Met Phe Asp Pro
1845 1850 1855
Lys Asn Ile Lys Thr Glu Ile Asp Leu Glu Ala His Gln Met Ala Asp
1860 1865 1870
Glu Ser Met Asp Val Asp Pro Asn Tyr Asp Pro Ser Asp Phe Leu Ala
1875 1880 1885
Met His Lys Gln Arg Gln Ser Leu Gly Glu Pro Ser Ser Leu Gln Gly
1890 1895 1900
Ala Phe Thr Asn Phe Leu Ser His Glu Gln Asp Asp Asn Gly Pro Tyr
1905 1910 1915 192
Asn Pro Ala Glu Ala Ser Thr Ser Ala Ala Ser Gly Ala Asp Leu Gly
1925 1930 1935
Met Asp Ala Ser Met Ala Met Gln Met Ala Pro Glu Met Pro Val Asn
1940 1945 1950
Thr Met Asn Asn Gly Met Gly Ile Asp Asp Asp Leu Asp Ile Ser Glu
1955 1960 1965
Ser Asp Glu Glu Asp Asp Gly Ser Arg Val Arg Ile Lys Lys Glu Val
1970 1975 1980
Phe Asp Asp Gly Asp Tyr Ala Leu Gln His Gln Gln Met Gly Gln Ala
1985 1990 1995 200
Ala Ser Gln Ser Gln Ile Tyr Met Val Asp Ser Ser Asn Glu Pro Thr
2005 2010 2015
Thr Leu Asp Tyr Gln Gln Pro Pro Gln Leu Asp Phe Gln Gln Val Gln
2020 2025 2030
Glu Met Glu Gln Leu Gln His Gln Val Met Pro Pro Met Gln Ser Glu
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Thr Phe
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Gly Gly Pro Phe Ser Leu Ala Gly Phe Leu Phe Gly Asn Ile Asn Gly
        35                  40                  45
Ala Gly Gln Leu Glu Gly Glu Ser Val Leu Asp Asp Glu Cys Lys Lys
    50                  55                  60
His Leu Ala Gly Leu Gly Ala Leu Gly Leu Gly Ser Leu Ile Thr Glu
65                  70                  75                  80
Leu Thr Ala Asn Glu Glu Leu Thr Gly Thr Asp Gly Ala Leu Val Asn
                85                  90                  95
Asp Glu Gly Trp Val Arg Ser Thr Glu Asp Ala Val Asp Tyr Ser Asp
            100                 105                 110
Ile Asn Glu Val Ala Glu Asp Glu Ser Arg Arg Tyr Gln Gln Thr Met
        115                 120                 125
Gly Ser Leu Gln Pro Leu Cys His Ser Asp Tyr Asp Glu Asp Asp Tyr
    130                 135                 140
Asp Ala Asp Cys Glu Asp Ile Asp Cys Lys Leu Met Pro Pro Pro Pro
145                 150                 155                 160
Pro Pro Pro Gly Pro Met Lys Lys Asp Lys Asp Gln Asp Ser Ile Thr
                165                 170                 175
Gly Glu Lys Val Asp Phe Ser Ser Ser Ser Asp Ser Glu Ser Glu Met
            180                 185                 190
Gly Pro Gln Glu Ala Thr Gln Ala Glu Ser Glu Asp Gly Lys Leu Thr
        195                 200                 205
Leu Pro Leu Ala Gly Ile Met Gln His Asp Ala Thr Lys Leu Leu Pro
    210                 215                 220
Ser Val Thr Glu Leu Phe Pro Glu Phe Arg Pro Gly Lys Val Leu Arg
225                 230                 235                 240
Phe Leu Arg Leu Phe Gly Pro Gly Lys Asn Val Pro Ser Val Trp Arg
                245                 250                 255
Ser Ala Arg Arg Lys Arg Lys Lys Lys His Arg Glu Leu Ile Gln Glu
            260                 265                 270
Glu Gln Ile Gln Glu Val Glu Cys Ser Val Glu Ser Glu Val Ser Gln
        275                 280                 285
Lys Ser Leu Trp Asn Tyr Asp Tyr Ala Pro Pro Pro Pro Pro Glu Gln
    290                 295                 300
Cys Leu Ser Asp Asp Glu Ile Thr Met Met Ala Pro Val Glu Ser Lys
305                 310                 315                 320
Phe Ser Gln Ser Thr Gly Asp Ile Asp Lys Val Thr Asp Thr Lys Pro
                325                 330                 335
Arg Val Ala Glu Trp Arg Tyr Gly Pro Ala Arg Leu Trp Tyr Asp Met
            340                 345                 350
Leu Gly Val Pro Glu Asp Gly Ser Gly Phe Asp Tyr Gly Phe Lys Leu
        355                 360                 365
Arg Lys Thr Glu His Glu Pro Val Ile Lys Ser Arg Met Ile Glu Glu
    370                 375                 380
Phe Arg Lys Leu Glu Glu Asn Asn Gly Thr Asp Leu Leu Ala Asp Glu
385                 390                 395                 400
Asn Phe Leu Met Val Thr Gln Leu His Trp Glu Asp Asp Ile Ile Trp
                405                 410                 415
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Asp Gly Glu Asp Val Lys His Lys Gly Thr Lys Pro Gln Arg Ala Ser
            420                 425                 430
Leu Ala Gly Trp Leu Pro Ser Ser Met Thr Arg Asn Ala Met Ala Tyr
        435                 440                 445
Asn Val Gln Gln Gly Phe Ala Ala Thr Leu Asp Asp Asp Lys Pro Trp
    450                 455                 460
Tyr Ser Ile Phe Pro Ile Asp Asn Glu Asp Leu Val Tyr Gly Arg Trp
465                 470                 475                 480
Glu Asp Asn Ile Ile Trp Asp Ala Gln Ala Met Pro Arg Leu Leu Glu
                485                 490                 495
Pro Pro Val Leu Thr Leu Asp Pro Asn Asp Glu Asn Leu Ile Leu Glu
            500                 505                 510
Ile Pro Asp Glu Lys Glu Glu Ala Thr Ser Asn Ser Pro Ser Lys Glu
        515                 520                 525
Ser Lys Lys Glu Ser Ser Leu Lys Lys Ser Arg Ile Leu Leu Gly Lys
    530                 535                 540
Thr Gly Val Ile Lys Glu Glu Pro Gln Gln Asn Met Ser Gln Pro Glu
545                 550                 555                 560
Val Lys Asp Pro Trp Asn Leu Ser Asn Asp Glu Tyr Tyr Tyr Pro Lys
                565                 570                 575
Gln Gln Gly Leu Arg Gly Thr Phe Gly Gly Asn Ile Ile Gln His Ser
            580                 585                 590
Ile Pro Ala Val Glu Leu Arg Gln Pro Phe Phe Pro Thr His Met Gly
        595                 600                 605
Pro Ile Lys Leu Arg Gln Phe His Arg Pro Pro Leu Lys Lys Tyr Ser
    610                 615                 620
Phe Gly Ala Leu Ser Gln Pro Gly Pro His Ser Val Gln Pro Leu Leu
625                 630                 635                 640
Lys His Ile Lys Lys Lys Ala Lys Met Arg Glu Gln Glu Arg Gln Ala
                645                 650                 655
Ser Gly Gly Gly Glu Met Phe Phe Met Arg Thr Pro Gln Asp Leu Thr
            660                 665                 670
Gly Lys Asp Gly Asp Leu Ile Leu Ala Glu Tyr Ser Glu Glu Asn Gly
        675                 680                 685
Pro Leu Met Met Gln Val Gly Met Ala Thr Lys Ile Lys Asn Tyr Tyr
    690                 695                 700
Lys Arg Lys Pro Gly Lys Asp Pro Gly Ala Pro Asp Cys Lys Tyr Gly
705                 710                 715                 720
Glu Thr Val Tyr Cys His Thr Ser Pro Phe Leu Gly Ser Leu His Pro
                725                 730                 735
Gly Gln Leu Leu Gln Ala Phe Glu Asn Asn Leu Phe Arg Ala Pro Ile
            740                 745                 750
Tyr Leu His Lys Met Pro Glu Thr Asp Phe Leu Ile Ile Arg Thr Arg
        755                 760                 765
Gln Gly Tyr Tyr Ile Arg Glu Leu Val Asp Ile Phe Val Val Gly Gln
    770                 775                 780
Gln Cys Pro Leu Phe Glu Val Pro Gly Pro Asn Ser Lys Arg Ala Asn
785                 790                 795                 800
Thr His Ile Arg Asp Phe Leu Gln Val Phe Ile Tyr Arg Leu Phe Trp
                805                 810                 815
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Lys Ser Lys Asp Arg Pro Arg Arg Ile Arg Met Glu Asp Ile Lys Lys
820 825 830
Ala Phe Pro Ser His Ser Glu Ser Ser Ile Arg Lys Arg Leu Lys Leu
835 840 845
Cys Ala Asp Phe Lys Arg Thr Gly Met Asp Ser Asn Trp Trp Val Leu
850 855 860
Lys Ser Asp Phe Arg Leu Pro Thr Glu Glu Glu Ile Arg Ala Met Val
865 870 875 880
Ser Pro Glu Gln Cys Cys Ala Tyr Tyr Ser Met Ile Ala Ala Glu Gln
885 890 895
Arg Leu Lys Asp Ala Gly Tyr Gly Glu Lys Ser Phe Phe Ala Pro Glu
900 905 910
Glu Glu Asn Glu Glu Asp Phe Gln Met Lys Ile Asp Asp Glu Val Arg
915 920 925
Thr Ala Pro Trp Asn Thr Thr Arg Ala Phe Ile Ala Ala Met Lys Gly
930 935 940
Lys Cys Leu Leu Glu Val Thr Gly Val Ala Asp Pro Thr Gly Cys Gly
945 950 955 960
Glu Gly Phe Ser Tyr Val Lys Ile Pro Asn Lys Pro Thr Gln Gln Lys
965 970 975
Asp Asp Lys Glu Pro Gln Pro Val Lys Lys Thr Val Thr Gly Thr Asp
980 985 990
Ala Asp Leu Arg Arg Leu Ser Leu Lys Asn Ala Lys Gln Leu Leu Arg
995 1000 1005
Lys Phe Gly Val Pro Glu Glu Glu Ile Lys Lys Leu Ser Arg Trp Glu
1010 1015 1020
Val Ile Asp Val Val Arg Thr Met Ser Thr Glu Gln Ala Arg Ser Gly
1025 1030 1035 104
Glu Gly Pro Met Ser Lys Phe Ala Arg Gly Ser Arg Phe Ser Val Ala
1045 1050 1055
Glu His Gln Glu Arg Tyr Lys Glu Glu Cys Gln Arg Ile Phe Asp Leu
1060 1065 1070
Gln Asn Lys Val Leu Ser Ser Thr Glu Val Leu Ser Thr Asp Thr Asp
1075 1080 1085
Ser Ser Ser Ala Glu Asp Ser Asp Phe Glu Glu Met Gly Lys Asn Ile
1090 1095 1100
Glu Asn Met Leu Gln Asn Lys Lys Thr Ser Ser Gln Leu Ser Arg Glu
1105 1110 1115 112
Arg Glu Glu Gln Glu Arg Lys Glu Leu Gln Arg Met Leu Leu Ala Ala
1125 1130 1135
Gly Ser Ala Ala Ser Gly Asn Asn His Arg Asp Asp Asp Thr Ala Ser
1140 1145 1150
Val Thr Ser Leu Asn Ser Ser Ala Thr Gly Arg Cys Leu Lys Ile Tyr
1155 1160 1165
Arg Thr Phe Arg Asp Glu Glu Gly Lys Glu Tyr Val Arg Cys Glu Thr
1170 1175 1180
Val Arg Lys Pro Ala Val Ile Asp Ala Tyr Val Arg Ile Arg Thr Thr
1185 1190 1195 120
Lys Asp Glu Glu Phe Ile Arg Lys Phe Ala Leu Phe Asp Glu Gln His
1205 1210 1215

Arg Glu Glu Met Arg Lys Glu Arg Arg Arg Ile Gln Glu Gln Leu Arg
1220 1225 1230
Arg Leu Lys Arg Asn Gln Glu Lys Glu Lys Leu Lys Gly Pro Pro Glu
1235 1240 1245
Lys Lys Pro Lys Lys Met Lys Glu Arg Pro Asp Leu Lys Leu Lys Cys
1250 1255 1260
Gly Ala Cys Gly Ala Ile Gly His Met Arg Thr Asn Lys Phe Cys Pro
1265 1270 1275 128
Leu Tyr Tyr Gln Thr Asn Ala Pro Pro Ser Asn Pro Val Ala Met Thr
1285 1290 1295
Glu Glu Gln Glu Glu Glu Leu Glu Lys Thr Val Ile His Asn Asp Asn
1300 1305 1310
Glu Glu Leu Ile Lys Val Glu Gly Thr Lys Ile Val Leu Gly Lys Gln
1315 1320 1325
Leu Ile Glu Ser Ala Asp Glu Val Arg Arg Lys Ser Leu Val Leu Lys
1330 1335 1340
Phe Pro Lys Gln Gln Leu Pro Pro Lys Lys Lys Arg Arg Val Gly Thr
1345 1350 1355 136
Thr Val His Cys Asp Tyr Leu Asn Arg Pro His Lys Ser Ile His Arg
1365 1370 1375
Arg Arg Thr Asp Pro Met Val Thr Leu Ser Ser Ile Leu Glu Ser Ile
1380 1385 1390
Ile Asn Asp Met Arg Asp Leu Pro Asn Thr Tyr Pro Phe His Thr Pro
1395 1400 1405
Val Asn Ala Lys Val Val Lys Asp Tyr Tyr Lys Ile Ile Thr Arg Pro
1410 1415 1420
Met Asp Leu Gln Thr Leu Arg Glu Asn Val Arg Lys Arg Leu Tyr Pro
1425 1430 1435 144
Ser Arg Glu Glu Phe Arg Glu His Leu Glu Leu Ile Val Lys Asn Ser
1445 1450 1455
Ala Thr Tyr Asn Gly Pro Lys His Ser Leu Thr Gln Ile Ser Gln Ser
1460 1465 1470
Met Leu Asp Leu Cys Asp Glu Lys Leu Lys Glu Lys Glu Asp Lys Leu
1475 1480 1485
Ala Arg Leu Glu Lys Ala Ile Asn Pro Leu Leu Asp Asp Asp Asp Gln
1490 1495 1500
Val Ala Phe Ser Phe Ile Leu Asp Asn Ile Val Thr Gln Lys Met Met
1505 1510 1515 152
Ala Val Pro Asp Ser Trp Pro Phe His His Pro Val Asn Lys Lys Phe
1525 1530 1535
Val Pro Asp Tyr Tyr Lys Val Ile Val Asn Pro Met Asp Leu Glu Thr
1540 1545 1550
Ile Arg Lys Asn Ile Ser Lys His Lys Tyr Gln Ser Arg Glu Ser Phe
1555 1560 1565
Leu Asp Asp Val Asn Leu Ile Leu Ala Asn Ser Val Lys Tyr Asn Gly
1570 1575 1580
Pro Glu Ser Gln Tyr Thr Lys Thr Ala Gln Glu Ile Val Asn Val Cys
1585 1590 1595 160
Tyr Gln Thr Leu Thr Glu Tyr Asp Glu His Leu Thr Gln Leu Glu Lys
1605 1610 1615

Asp Ile Cys Thr Ala Lys Glu Ala Ala Leu Glu Glu Ala Glu Leu Glu
1620 1625 1630
Ser Leu Asp Pro Met Thr Pro Gly Pro Tyr Thr Pro Gln Pro Pro Asp
1635 1640 1645
Leu Tyr Asp Thr Asn Thr Ser Leu Ser Met Ser Arg Asp Ala Ser Val
1650 1655 1660
Phe Gln Asp Glu Ser Asn Met Ser Val Leu Asp Ile Pro Ser Ala Thr
1665 1670 1675 168
Pro Glu Lys Gln Val Thr Gln Glu Gly Glu Asp Gly Asp Gly Asp Leu
1685 1690 1695
Ala Asp Glu Glu Glu Gly Thr Val Gln Gln Pro Gln Ala Ser Val Leu
1700 1705 1710
Tyr Glu Asp Leu Leu Met Ser Glu Gly Glu Asp Asp Glu Glu Asp Ala
1715 1720 1725
Gly Ser Asp Glu Glu Gly Asp Asn Pro Phe Ser Ala Ile Gln Leu Ser
1730 1735 1740
Glu Ser Gly Ser Asp Ser Asp Val Gly Ser Gly Gly Ile Arg Pro Lys
1745 1750 1755 176
Gln Pro Arg Met Leu Gln Glu Asn Thr Arg Met Asp Met Glu Asn Glu
1765 1770 1775
Glu Ser Met Met Ser Tyr Glu Gly Asp Gly Gly Glu Ala Ser His Gly
1780 1785 1790
Leu Glu Asp Ser Asn Ile Ser Tyr Gly Ser Tyr Glu Glu Pro Asp Pro
1795 1800 1805
Lys Ser Asn Thr Gln Asp Thr Ser Phe Ser Ser Ile Gly Gly Tyr Glu
1810 1815 1820
Val Ser Glu Glu Glu Glu Asp Glu Glu Glu Glu Glu Gln Arg Ser Gly
1825 1830 1835 184
Pro Ser Val Leu Ser Gln Val His Leu Ser Glu Asp Glu Glu Asp Ser
1845 1850 1855
Glu Asp Phe His Ser Ile Ala Gly Asp Ser Asp Leu Asp Ser Asp Glu
1860 1865 1870

<210> 7
<211> 429
<212> PRT
<213> C. albicans

<400> 7
Glu Leu Leu Leu Asn Asn Pro Leu Asp Asn Ser Lys Gln Asn Arg Gln
1 5 10 15
Lys Ile Glu Asn Asp Asn Thr Thr Asn Asn Tyr Asn Gln Asn Asn Ser
20 25 30
Asn Val Gln Asp Glu Glu Glu Asp Asp Asp Ile Phe Asn Gly Gln Ile
35 40 45
Asn Leu Asp Lys Leu Lys Leu Asp Met Asn Asp Pro Asn Leu Leu Phe
50 55 60
Val Pro Ser Lys Lys Val Asp Ala Thr Lys Ser Val Val Pro Ser Thr
65 70 75 80
Asp Lys Leu Leu Glu Leu Lys Phe Asn Ile Ser Asn Asp Gln Glu Tyr

```
                85                  90                  95
Glu Leu Leu Arg Lys Asn Tyr Asn Thr Lys Gln Arg Ser Gln Leu Ser
            100                 105                 110
Asn Leu Asn Ile Glu His Ser Val Pro Ala Leu Arg Leu Gln Thr Pro
        115                 120                 125
Tyr Tyr Lys Val Lys Leu Ser Thr Asp Glu Thr Arg Ser Phe His Arg
    130                 135                 140
Pro Val Phe Asn Val Arg Pro Gly Thr Leu Val Ser Phe Ser Lys Leu
145                 150                 155                 160
Lys Leu Arg Lys Arg Lys Lys Asp Lys Gly Lys Ser Leu Gln Gln Ile
                165                 170                 175
Phe Ser Lys Thr Ser Asp Leu Thr Val Ala Asp Thr Gly Asn Ile Ile
            180                 185                 190
Ala Leu Glu Tyr Ser Glu Gln Tyr Pro Pro Ile Leu Ser Asn Phe Gly
        195                 200                 205
Met Gly Ser Lys Leu Ile Asn Tyr Tyr Arg Lys Glu Arg Pro Asn Asp
    210                 215                 220
Thr Ser Arg Pro Lys Ala Gln Ile Gly Glu Thr His Ile Leu Gly Val
225                 230                 235                 240
Glu Asp Arg Ser Pro Phe Trp Asn Phe Gly Glu Val Ala Pro Gly Asp
                245                 250                 255
Phe Val Pro Thr Leu Tyr Asn Asn Met Val Arg Ala Pro Ile Phe Lys
            260                 265                 270
His Asp Asn Lys Pro Thr Asp Phe Leu Leu Val Lys Ser Gln Gly Ala
        275                 280                 285
Gly Ser His Gln Lys Phe Tyr Leu Arg Gly Ile Asn Phe Asn Phe Ala
    290                 295                 300
Val Gly Asn Thr Phe Pro Val Glu Val Pro Ala Pro His Ser Arg Lys
305                 310                 315                 320
Val Thr Asn Ile Ser Lys Asn Arg Leu Lys Met Val Val Phe Arg Val
                325                 330                 335
Met Asn Ser Leu Gly Val Pro Arg Ile Ser Val Lys Asp Val Ser Lys
            340                 345                 350
His Phe Pro Glu His Ser Asp Met Gln Asn Arg Gln Arg Leu Lys Glu
        355                 360                 365
Phe Met Glu Tyr Gln Arg Gln Gly Glu Asp Gln Gly Tyr Trp Lys Val
    370                 375                 380
Arg Gly Leu Asn Asp Val Ile Pro Gly Glu Glu Glu Ile Arg Thr Met
385                 390                 395                 400
Ile Thr Pro Glu Asp Ser Ser Leu Met Asp Thr Met Gln Phe Gly Gln
                405                 410                 415
Gln Val Leu Asp Asp Asn Met Val Leu Phe Gly Glu Gln
            420                 425
```

<210> 8
<211> 434
<212> PRT
<213> S. cerevisiae

<400> 8

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Met Thr Pro Asn Leu Lys Phe Ser Gly Gly Tyr Lys Leu Lys Ser Leu
 1               5                  10                  15
Ile Glu Asp Val Ala Glu Asp Trp Gln Trp Asp Glu Asp Met Ile Ile
            20                  25                  30
Asp Ala Lys Leu Lys Glu Ser Lys His Ala Glu Leu Asn Met Asn Asp
        35                  40                  45
Glu Lys Leu Leu Leu Met Ile Glu Lys Thr Asn Asn Leu Ala Gln Gln
    50                  55                  60
Lys Gln Gln Leu Asp Ser Ser Asn Leu Ile Leu Pro Leu Asn Glu Thr
65                  70                  75                  80
Ile Leu Gln Gln Lys Phe Asn Leu Ser Asn Asp Asp Lys Tyr Gln Ile
                85                  90                  95
Leu Lys Lys Thr His Gln Thr Lys Val Arg Ser Thr Ile Ser Asn Leu
            100                 105                 110
Asn Ile Gln His Ser Gln Pro Ala Ile Asn Leu Gln Ser Pro Phe Tyr
        115                 120                 125
Lys Val Ala Val Pro Arg Tyr Gln Leu Arg His Phe His Arg Glu Asn
    130                 135                 140
Phe Gly Ser His Ile Arg Pro Gly Thr Lys Ile Val Phe Ser Lys Leu
145                 150                 155                 160
Lys Ala Arg Lys Arg Lys Arg Asp Lys Gly Lys Asp Val Lys Glu Ser
                165                 170                 175
Phe Ser Thr Ser Gln Asp Leu Thr Ile Gly Asp Thr Ala Pro Val Tyr
            180                 185                 190
Leu Met Glu Tyr Ser Glu Gln Thr Pro Val Ala Leu Ser Lys Phe Gly
        195                 200                 205
Met Ala Asn Lys Leu Ile Asn Tyr Tyr Arg Lys Ala Asn Glu Gln Asp
    210                 215                 220
Thr Leu Arg Pro Lys Leu Pro Val Gly Glu Thr His Val Leu Gly Val
225                 230                 235                 240
Gln Asp Lys Ser Pro Phe Trp Asn Phe Gly Phe Val Glu Pro Gly His
                245                 250                 255
Ile Val Pro Thr Leu Tyr Asn Asn Met Ile Arg Ala Pro Val Phe Lys
            260                 265                 270
His Asp Ile Ser Gly Thr Asp Phe Leu Leu Thr Lys Ser Ser Gly Phe
        275                 280                 285
Gly Ile Ser Asn Arg Phe Tyr Leu Arg Asn Ile Asn His Leu Phe Thr
    290                 295                 300
Val Gly Gln Thr Phe Pro Val Glu Glu Ile Pro Gly Pro Asn Ser Arg
305                 310                 315                 320
Lys Val Thr Ser Met Lys Ala Thr Arg Leu Lys Met Ile Ile Tyr Arg
                325                 330                 335
Ile Leu Asn His Asn His Ser Lys Ala Ile Ser Ile Asp Pro Ile Ala
            340                 345                 350
Lys His Phe Pro Asp Gln Asp Tyr Gly Gln Asn Arg Gln Lys Val Lys
        355                 360                 365
Glu Phe Met Lys Tyr Gln Arg Asp Gly Pro Glu Lys Gly Leu Trp Arg
    370                 375                 380
Leu Lys Asp Asp Glu Lys Leu Leu Asp Asn Glu Ala Val Lys Ser Leu
385                 390                 395                 400
```

Ile Thr Pro Glu Gln Ile Ser Gln Val Glu Ser Met Ser Gln Gly Leu
405 410 415
Gln Phe Gln Glu Asp Asn Glu Ala Tyr Asn Phe Asp Ser Lys Leu Lys
420 425 430
Ser Leu

<210> 9
<211> 415
<212> PRT
<213> S. pombe

<400> 9
Val Asn Lys Thr Asn Gln Ser Ser Phe Phe Ile Asp Lys Ser Leu Val
1 5 10 15
Asp Ile Asp Phe Ala Phe Asp Glu Asn Ile Phe Asp Gly Asp Thr Gly
20 25 30
Thr Ser Lys Val Val Leu Asn Leu Asn Asp Pro Lys Leu Leu Leu Gln
35 40 45
Pro Gln Leu Pro Lys Lys Glu Asp Ser Gln Arg Ser Phe Ala Asp Thr
50 55 60
His Gln Arg Asn Ser Leu Ala Trp Lys Phe Asn Ile Ser Asn Asp Pro
65 70 75 80
Ala Tyr Glu Met Leu Lys Gln Asn His Gln Ser Lys Val Arg Asn Thr
85 90 95
Leu Ser Gln Leu Ala Ile Glu His Ala Ala Phe Ala Glu Lys Leu Thr
100 105 110
Phe Pro Tyr Tyr Lys Thr Arg Leu Ser Lys Arg Ala Val Arg Ser Tyr
115 120 125
His Arg Pro Thr Met Ser Phe Lys Pro Asn Ala Ala Ile Val Phe Ser
130 135 140
Pro Leu Ile Val Arg Lys Arg Ser Lys Asp Lys His Lys Ser Glu Arg
145 150 155 160
Glu Leu Ile Pro Thr Thr Lys Glu Ile Thr Met Gly Asp Thr Thr His
165 170 175
Ala Ile Leu Val Glu Phe Ser Glu Glu His Pro Ala Val Leu Ser Asn
180 185 190
Ala Gly Met Ala Ser Arg Ile Val Asn Tyr Tyr Arg Lys Lys Asn Glu
195 200 205
Gln Asp Glu Ser Arg Pro Lys Leu Glu Val Gly Glu Ser His Val Leu
210 215 220
Asp Val Gln Asp Arg Ser Pro Phe Trp Asn Phe Gly Ser Val Glu Pro
225 230 235 240
Gly Glu Ile Thr Pro Thr Leu Tyr Asn Lys Met Ile Arg Ala Pro Leu
245 250 255
Phe Lys His Glu Val Pro Pro Thr Asp Phe Ile Leu Ile Arg Asn Ser
260 265 270
Ser Ser Tyr Gly Ser Lys Tyr Tyr Leu Lys Asn Ile Asn His Met Phe
275 280 285
Val Ser Gly Gln Thr Phe Pro Val Thr Asp Val Pro Gly Pro His Ser

290 295 300
Arg Lys Val Thr Thr Ala Ser Lys Asn Arg Leu Lys Met Leu Val Phe
305 310 315 320
Arg Leu Ile Arg Arg Ser Pro Asn Gly Gly Leu Phe Ile Arg Gln Leu
325 330 335
Ser Lys His Phe Ser Asp Gln Asn Glu Met Gln Ile Arg Gln Arg Leu
340 345 350
Lys Glu Phe Met Glu Tyr Lys Lys Lys Gly Asp Gly Pro Gly Tyr Trp
355 360 365
Lys Leu Lys Ser Asn Glu Val Val Pro Asp Glu Ala Gly Thr Arg Ser
370 375 380
Met Val Ser Pro Glu Thr Val Cys Leu Leu Glu Ser Met Gln Val Gly
385 390 395 400
Val Arg Gln Leu Glu Asp Ala Gly Tyr Gly Lys Thr Met Asp Glu
405 410 415

<210> 10
<211> 481
<212> PRT
<213> Human

<400> 10
Ser Leu Ala Gly Trp Leu Pro Ser Ser Met Thr Arg Asn Ala Met Ala
1 5 10 15
Tyr Asn Val Gln Gln Gly Phe Ala Ala Thr Leu Asp Asp Asp Lys Pro
20 25 30
Trp Tyr Ser Ile Phe Pro Ile Asp Asn Glu Asp Leu Val Tyr Gly Arg
35 40 45
Trp Glu Asp Asn Ile Ile Trp Asp Ala Gln Ala Met Pro Arg Leu Leu
50 55 60
Glu Pro Pro Val Leu Thr Leu Asp Pro Asn Asp Glu Asn Leu Ile Leu
65 70 75 80
Glu Ile Pro Asp Glu Lys Glu Glu Ala Thr Ser Asn Ser Pro Ser Lys
85 90 95
Glu Ser Lys Lys Glu Ser Ser Leu Lys Lys Ser Arg Ile Leu Leu Gly
100 105 110
Lys Thr Gly Val Ile Lys Glu Glu Pro Gln Gln Asn Met Ser Gln Pro
115 120 125
Glu Val Lys Asp Pro Trp Asn Leu Ser Asn Asp Glu Tyr Tyr Tyr Pro
130 135 140
Lys Gln Gln Gly Leu Arg Gly Thr Phe Gly Gly Asn Ile Ile Gln His
145 150 155 160
Ser Ile Pro Ala Val Glu Leu Arg Gln Pro Phe Phe Pro Thr His Met
165 170 175
Gly Pro Ile Lys Leu Arg Gln Phe His Arg Pro Pro Leu Lys Lys Tyr
180 185 190
Ser Phe Gly Ala Leu Ser Gln Pro Gly Pro His Ser Val Gln Pro Leu
195 200 205
Leu Lys His Ile Lys Lys Lys Ala Lys Met Arg Glu Gln Glu Arg Gln
210 215 220

```
Ala Ser Gly Gly Gly Glu Met Phe Phe Met Arg Thr Pro Gln Asp Leu
225                 230                 235                 240
Thr Gly Lys Asp Gly Asp Leu Ile Leu Ala Glu Tyr Ser Glu Glu Asn
                245                 250                 255
Gly Pro Leu Met Met Gln Val Gly Met Ala Thr Lys Ile Lys Asn Tyr
            260                 265                 270
Tyr Lys Arg Lys Pro Gly Lys Asp Pro Gly Ala Pro Asp Cys Lys Tyr
        275                 280                 285
Gly Glu Thr Val Tyr Cys His Thr Ser Pro Phe Leu Gly Ser Leu His
    290                 295                 300
Pro Gly Gln Leu Leu Gln Ala Phe Glu Asn Asn Leu Phe Arg Ala Pro
305                 310                 315                 320
Ile Tyr Leu His Lys Met Pro Glu Thr Asp Phe Leu Ile Ile Arg Thr
                325                 330                 335
Arg Gln Gly Tyr Tyr Ile Arg Glu Leu Val Asp Ile Phe Val Val Gly
            340                 345                 350
Gln Gln Cys Pro Leu Phe Glu Val Pro Gly Pro Asn Ser Lys Arg Ala
        355                 360                 365
Asn Thr His Ile Arg Asp Phe Leu Gln Val Phe Ile Tyr Arg Leu Phe
    370                 375                 380
Trp Lys Ser Lys Asp Arg Pro Arg Arg Ile Arg Met Glu Asp Ile Lys
385                 390                 395                 400
Lys Ala Phe Pro Ser His Ser Glu Ser Ser Ile Arg Lys Arg Leu Lys
                405                 410                 415
Leu Cys Ala Asp Phe Lys Arg Thr Gly Met Asp Ser Asn Trp Trp Val
            420                 425                 430
Leu Lys Ser Asp Phe Arg Leu Pro Thr Glu Glu Glu Ile Arg Ala Met
        435                 440                 445
Val Ser Pro Glu Gln Cys Cys Ala Tyr Tyr Ser Met Ile Ala Ala Glu
    450                 455                 460
Gln Arg Leu Lys Asp Ala Gly Tyr Gly Glu Lys Ser Phe Phe Ala Pro
465                 470                 475                 480
Glu
```

<210> 11
<211> 74
<212> PRT
<213> C. albicans

<400> 11

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Asp Ala Glu Asn Gly Asp Asp Ile Asn Lys Asp Lys Glu Lys Glu Val
 1               5                  10                  15
Glu Lys Glu Lys Glu Gln Glu Arg Glu Glu Glu Lys Gly Lys Asp Lys
            20                  25                  30
Glu Lys Asp Lys Asp Lys Glu Lys Asp Lys Thr Glu Lys Glu Lys Ser
        35                  40                  45
Lys Lys Ser Lys Glu Gln Asp Thr Glu Ile Asp Val Glu Glu Glu Leu
    50                  55                  60
Ala Pro Trp Asn Leu Ser Arg Asn Phe Val
```

65 70

<210> 12
<211> 18
<212> DNA
<213> "Artificial Sequence"

<220>

<223> Inosine

<400> 12
ccwggwccwa aytcnadd 18

<210> 13
<211> 23
<212> DNA
<213> "Artificial Sequence"

<400> 13
gayccwachg gwtgtggwga agg 23

<210> 14
<211> 24
<212> DNA
<213> "Artificial Sequence"

<400> 14
cctttcwcca cawccagtwg grtc 24

<210> 15
<211> 19
<212> DNA
<213> "Artificial Sequence"

<220>

<223> Inosine

<400> 15
ttrtthcayc tnartgwcc 19

<210> 16
<211> 30
<212> DNA
<213> "Artificial Sequence"

<400> 16
ccgctcgaga tgacacccaa cttaaagttc 30

<210> 17
<211> 29
<212> DNA
<213> "Artificial Sequence"

<400> 17
cgcggatcca gagattttag cttagaatc 29

<210> 18
<211> 37
<212> DNA
<213> "Artificial Sequence"

<400> 18
ggaattccat atgcttttgc tcaacaatcc cttggac 37

<210> 19
<211> 32
<212> DNA
<213> "Artificial Sequence"

<400> 19
cgcggatccc tgctctgctc accgaataac ac 32

<210> 20
<211> 37
<212> DNA
<213> "Artificial Sequence"

<400> 20
ggaattccat atgagcctgg caggctggct tccttct 37

<210> 21
<211> 33
<212> DNA
<213> "Artificial Sequence"

<400> 21
ccgctcgagt tctggagcaa aaaaggattt ctc 33

<210> 22
<211> 0
<212> DNA
<213> Human

<400> 22
Met Gly Pro Gly Cys Asp Leu Leu Leu Arg Thr Ala Ala Thr Ile Thr
1 5 10 15
Ala Ala Ala Ile Met Ser Asp Thr Asp Ser Asp Glu Asp Ser Ala Gly
20 25 30

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Gly Gly Pro Phe Ser Leu Ala Gly Phe Leu Phe Gly Asn Ile Asn Gly
        35                  40                  45
Ala Gly Gln Leu Glu Gly Glu Ser Val Leu Asp Asp Glu Cys Lys Lys
    50                  55                  60
His Leu Ala Gly Leu Gly Ala Leu Gly Leu Gly Ser Leu Ile Thr Glu
65                  70                  75                  80
Leu Thr Ala Asn Glu Glu Leu Thr Gly Thr Asp Gly Ala Leu Val Asn
                85                  90                  95
Asp Glu Gly Trp Val Arg Ser Thr Glu Asp Ala Val Asp Tyr Ser Asp
            100                 105                 110
Ile Asn Glu Val Ala Glu Asp Glu Ser Arg Arg Tyr Gln Gln Thr Met
        115                 120                 125
Gly Ser Leu Gln Pro Leu Cys His Ser Asp Tyr Asp Glu Asp Asp Tyr
    130                 135                 140
Asp Ala Asp Cys Glu Asp Ile Asp Cys Lys Leu Met Pro Pro Pro Pro
145                 150                 155                 160
Pro Pro Pro Gly Pro Met Lys Lys Asp Lys Asp Gln Asp Ser Ile Thr
                165                 170                 175
Gly Glu Lys Val Asp Phe Ser Ser Ser Ser Asp Ser Glu Ser Glu Met
            180                 185                 190
Gly Pro Gln Glu Ala Thr Gln Ala Glu Ser Glu Asp Gly Lys Leu Thr
        195                 200                 205
Leu Pro Leu Ala Gly Ile Met Gln His Asp Ala Thr Lys Leu Leu Pro
    210                 215                 220
Ser Val Thr Glu Leu Phe Pro Glu Phe Arg Pro Gly Lys Val Leu Arg
225                 230                 235                 240
Phe Leu Arg Leu Phe Gly Pro Gly Lys Asn Val Pro Ser Val Trp Arg
                245                 250                 255
Ser Ala Arg Arg Lys Arg Lys Lys Lys His Arg Glu Leu Ile Gln Glu
            260                 265                 270
Glu Gln Ile Gln Glu Val Glu Cys Ser Val Glu Ser Glu Val Ser Gln
        275                 280                 285
Lys Ser Leu Trp Asn Tyr Asp Tyr Ala Pro Pro Pro Pro Pro Glu Gln
    290                 295                 300
Cys Leu Ser Asp Asp Glu Ile Thr Met Met Ala Pro Val Glu Ser Lys
305                 310                 315                 320
Phe Ser Gln Ser Thr Gly Asp Ile Asp Lys Val Thr Asp Thr Lys Pro
                325                 330                 335
Arg Val Ala Glu Trp Arg Tyr Gly Pro Ala Arg Leu Trp Tyr Asp Met
            340                 345                 350
Leu Gly Val Pro Glu Asp Gly Ser Gly Phe Asp Tyr Gly Phe Lys Leu
        355                 360                 365
Arg Lys Thr Glu His Glu Pro Val Ile Lys Ser Arg Met Ile Glu Glu
    370                 375                 380
Phe Arg Lys Leu Glu Glu Asn Asn Gly Thr Asp Leu Leu Ala Asp Glu
385                 390                 395                 400
Asn Phe Leu Met Val Thr Gln Leu His Trp Glu Asp Asp Ile Ile Trp
                405                 410                 415
Asp Gly Glu Asp Val Lys His Lys Gly Thr Lys Pro Gln Arg Ala Ser
            420                 425                 430
```

```
Leu Ala Gly Trp Leu Pro Ser Ser Met Thr Arg Asn Ala Met Ala Tyr
        435                 440                 445
Asn Val Gln Gln Gly Phe Ala Ala Thr Leu Asp Asp Asp Lys Pro Trp
    450                 455                 460
Tyr Ser Ile Phe Pro Ile Asp Asn Glu Asp Leu Val Tyr Gly Arg Trp
465                 470                 475                 480
Glu Asp Asn Ile Ile Trp Asp Ala Gln Ala Met Pro Arg Leu Leu Glu
                485                 490                 495
Pro Pro Val Leu Thr Leu Asp Pro Asn Asp Glu Asn Leu Ile Leu Glu
            500                 505                 510
Ile Pro Asp Glu Lys Glu Glu Ala Thr Ser Asn Ser Pro Ser Lys Glu
        515                 520                 525
Ser Lys Lys Glu Ser Ser Leu Lys Lys Ser Arg Ile Leu Leu Gly Lys
    530                 535                 540
Thr Gly Val Ile Lys Glu Glu Pro Gln Gln Asn Met Ser Gln Pro Glu
545                 550                 555                 560
Val Lys Asp Pro Trp Asn Leu Ser Asn Asp Glu Tyr Tyr Tyr Pro Lys
                565                 570                 575
Gln Gln Gly Leu Arg Gly Thr Phe Gly Gly Asn Ile Ile Gln His Ser
            580                 585                 590
Ile Pro Ala Val Glu Leu Arg Gln Pro Phe Phe Pro Thr His Met Gly
        595                 600                 605
Pro Ile Lys Leu Arg Gln Phe His Arg Pro Pro Leu Lys Lys Tyr Ser
    610                 615                 620
Phe Gly Ala Leu Ser Gln Pro Gly Pro His Ser Val Gln Pro Leu Leu
625                 630                 635                 640
Lys His Ile Lys Lys Lys Ala Lys Met Arg Glu Gln Glu Arg Gln Ala
                645                 650                 655
Ser Gly Gly Gly Glu Met Phe Phe Met Arg Thr Pro Gln Asp Leu Thr
            660                 665                 670
Gly Lys Asp Gly Asp Leu Ile Leu Ala Glu Tyr Ser Glu Glu Asn Gly
        675                 680                 685
Pro Leu Met Met Gln Val Gly Met Ala Thr Lys Ile Lys Asn Tyr Tyr
    690                 695                 700
Lys Arg Lys Pro Gly Lys Asp Pro Gly Ala Pro Asp Cys Lys Tyr Gly
705                 710                 715                 720
Glu Thr Val Tyr Cys His Thr Ser Pro Phe Leu Gly Ser Leu His Pro
                725                 730                 735
Gly Gln Leu Leu Gln Ala Phe Glu Asn Asn Leu Phe Arg Ala Pro Ile
            740                 745                 750
Tyr Leu His Lys Met Pro Glu Thr Asp Phe Leu Ile Ile Arg Thr Arg
        755                 760                 765
Gln Gly Tyr Tyr Ile Arg Glu Leu Val Asp Ile Phe Val Val Gly Gln
    770                 775                 780
Gln Cys Pro Leu Phe Glu Val Pro Gly Pro Asn Ser Lys Arg Ala Asn
785                 790                 795                 800
Thr His Ile Arg Asp Phe Leu Gln Val Phe Ile Tyr Arg Leu Phe Trp
                805                 810                 815
Lys Ser Lys Asp Arg Pro Arg Arg Ile Arg Met Glu Asp Ile Lys Lys
            820                 825                 830
```

```
Ala Phe Pro Ser His Ser Glu Ser Ser Ile Arg Lys Arg Leu Lys Leu
        835                 840                 845
Cys Ala Asp Phe Lys Arg Thr Gly Met Asp Ser Asn Trp Trp Val Leu
    850                 855                 860
Lys Ser Asp Phe Arg Leu Pro Thr Glu Glu Glu Ile Arg Ala Met Val
865                 870                 875                 880
Ser Pro Glu Gln Cys Cys Ala Tyr Tyr Ser Met Ile Ala Ala Glu Gln
                885                 890                 895
Arg Leu Lys Asp Ala Gly Tyr Gly Glu Lys Ser Phe Phe Ala Pro Glu
            900                 905                 910
Glu Glu Asn Glu Glu Asp Phe Gln Met Lys Ile Asp Asp Glu Val Arg
        915                 920                 925
Thr Ala Pro Trp Asn Thr Thr Arg Ala Phe Ile Ala Ala Met Lys Gly
    930                 935                 940
Lys Cys Leu Leu Glu Val Thr Gly Val Ala Asp Pro Thr Gly Cys Gly
945                 950                 955                 960
Glu Gly Phe Ser Tyr Val Lys Ile Pro Asn Lys Pro Thr Gln Gln Lys
                965                 970                 975
Asp Asp Lys Glu Pro Gln Pro Val Lys Lys Thr Val Thr Gly Thr Asp
            980                 985                 990
Ala Asp Leu Arg Arg Leu Ser Leu Lys Asn Ala Lys Gln Leu Leu Arg
        995                 1000                1005
Lys Phe Gly Val Pro Glu Glu Glu Ile Lys Lys Leu Ser Arg Trp Glu
    1010                1015                1020
Val Ile Asp Val Val Arg Thr Met Ser Thr Glu Gln Ala Arg Ser Gly
1025                1030                1035                104
Glu Gly Pro Met Ser Lys Phe Ala Arg Gly Ser Arg Phe Ser Val Ala
                1045                1050                1055
Glu His Gln Glu Arg Tyr Lys Glu Glu Cys Gln Arg Ile Phe Asp Leu
            1060                1065                1070
Gln Asn Lys Val Leu Ser Ser Thr Glu Val Leu Ser Thr Asp Thr Asp
        1075                1080                1085
Ser Ser Ser Ala Glu Asp Ser Asp Phe Glu Glu Met Gly Lys Asn Ile
    1090                1095                1100
Glu Asn Met Leu Gln Asn Lys Lys Thr Ser Ser Gln Leu Ser Arg Glu
1105                1110                1115                112
Arg Glu Glu Gln Glu Arg Lys Glu Leu Gln Arg Met Leu Leu Ala Ala
                1125                1130                1135
Gly Ser Ala Ala Ser Gly Asn Asn His Arg Asp Asp Asp Thr Ala Ser
            1140                1145                1150
Val Thr Ser Leu Asn Ser Ser Ala Thr Gly Arg Cys Leu Lys Ile Tyr
        1155                1160                1165
Arg Thr Phe Arg Asp Glu Glu Gly Lys Glu Tyr Val Arg Cys Glu Thr
    1170                1175                1180
Val Arg Lys Pro Ala Val Ile Asp Ala Tyr Val Arg Ile Arg Thr Thr
1185                1190                1195                120
Lys Asp Glu Glu Phe Ile Arg Lys Phe Ala Leu Phe Asp Glu Gln His
                1205                1210                1215
Arg Glu Glu Met Arg Lys Glu Arg Arg Arg Ile Gln Glu Gln Leu Arg
            1220                1225                1230
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Arg Leu

<210> 23
<211> 52
<212> DNA
<213> C. albicans

<400> 23
acgcgtcgac atgcatcatc atcatcatca tatggaggat ctacccaggg at 52

<210> 24
<211> 38
<212> DNA
<213> C. albicans

<400> 24
atagttagcg gccgcacact gctggtgtca accaacaa 38

<210> 25
<211> 52
<212> DNA
<213> Human

<400> 25
acgcgtcgac atgcatcatc atcatcatca tatgggaccc ggctgcgatt tg 52

<210> 26
<211> 31
<212> DNA
<213> Human

<400> 26
gttgctctgc agctatcatg ctataataag c 31

<210> 27
<211> 31
<212> DNA
<213> Human

<400> 27
tgatagctgc agagcaacga ctgaaggatg c 31

<210> 28
<211> 32
<212> DNA
<213> Human

<400> 28
ccggtacctt cccgatgttg ttcatcaaaa ag 32

<210> 29
<211> 30
<212> DNA
<213> "Artificial Sequence"

<400> 29
acgcgtcgac atccaagttc aagttgtctg 30

<210> 30
<211> 42
<212> DNA
<213> "Artificial Sequence"

<400> 30
cgcggatccg cgctgcagtt ttcacatctt cttcttctgc ca 42

<210> 31
<211> 41
<212> DNA
<213> "Artificial Sequence"

<400> 31
aaaactgcag cgcggatccg cgtgcaggtg acgttattgg a 41

<210> 32
<211> 36
<212> DNA
<213> "Artificial Sequence"

<400> 32
atagtttagc ggccgccttg tgacaagaag tgacac 36